

REMARKS

Applicants have canceled claims 1-18 and added new claims 19-48. Applicants submit that the new claims are supported by the originally filed specification and are patentably distinct from the cited art of record.

The Examiner rejected claims 1-18 under 35 U.S.C. 112(1) as failing to comply with the written description requirement. Specifically, the Examiner stated that the pending claims included the term "free of voids" which is not supported by the originally filed specification. Applicants have canceled claims 1-18, thereby make the rejection moot.

Claims 1-18 were also rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants' admitted prior art (APA) in view of Liang and further in view of Hayner and Trumbore.

Liang discloses that the use of a vacuum of an inert gas that can be used to assist in forming a homogeneous composition of carboxylated polyethylene, polybutadiene or polybutadiene-based copolymer, amino-terminated polybutadiene, elemental sulfur and bitumen. (Col. 8, ln.67 - Col. 9, ln. 25). As is evident from the homogeneous composition disclosed in Liang, the disclosed composition is significantly different from the modified bitumen composition disclosed and claimed in the present invention. Furthermore, Liang does not disclose, teach or suggest that the mixing of the homogeneous composition under a vacuum has any effect on the amount of gaseous pockets that form in the homogeneous composition. Indeed, it is unclear from Liang that mixing under a vacuum has any effect on gaseous pockets that form in the homogeneous composition. Liang also is absent any disclosure or teaching concerning the amount of gaseous voids that form during the mixing of the bitumen. Liang further does not disclose, teach or suggest the addition of a primary and secondary modifying polymer to the bitumen. Liang also does not disclose any of the processing parameters for forming a roofing membrane that is disclosed and claimed in the present invention.

As such, Liang does not support an obvious rejection of any of the pending claims.

Hayner was cited for disclosing the use of SBS, SIS, SEBS and/or SB to modify bitumen. Hayner also does not disclose, teach or suggest a bitumen mixture that includes SBS and/or APP and SIS, SEBS and/or SE. Hayner is further absent any disclosure, teaching or suggestion that the bitumen mixture can or should be mixed under a vacuum to reduce the amount of gaseous pockets that form in the homogeneous composition. Indeed, similar to Liang, Hayner is absent any disclosure or teaching concerning the amount of gaseous voids that form during the mixing of the bitumen. Hayner further does not disclose any of the processing parameters for forming a roofing membrane that is disclosed and claimed in the present invention. As such, Hayner does not support an obvious rejection of any of the pending claims.

Trumbore was cited as disclosing a method of using a vacuum on an asphalt roofing product to reduce the amount of voids in the asphalt roofing product prior to coating the asphalt roofing product on a mat. Trumbore does not disclose, teach or suggest the composition of the bitumen matrix that is disclosed and defined in the claims of the present invention. Trumbore also does not disclose, teach or suggest the addition of a primary and secondary modifying polymer to the bitumen. Trumbore further does not disclose or teach the processing parameters for forming a roofing membrane that is disclosed and claimed in the present invention. As such, Trumbore does not support an obvious rejection of any of the pending claims.

In view of the deficiencies of the cited references as set forth above, the combination of select teachings from these references does not teach one skilled in the art the invention as set forth in the

pending claims. Applicants submit the claims presently pending in the above-identified patent application are in condition for allowance and a notice to that effect is earnestly solicited.

Respectfully submitted,
FAY, SHARPE, FAGAN, MINNICH & McKEE

By: 

BRIAN E. TURUNG
Registration No. 35,394
1100 Superior Avenue, Seventh Floor
Cleveland, Ohio 44114-2579
Telephone: (216) 861-5582
Facsimile: (216) 241-1666